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ABSTRACT

A common theme in educational change literature is that principals do not truly understand the change process and therefore cannot successfully implement change. This paper presents findings of a study that examined the change processes that Colorado principals utilized when initiating and implementing change in their buildings. The study also examined whether the elements of the processes used matched the current change models reported in the literature. The research framework consisted of the following from change models: the concerns-based adoption model, the diffusion model, the reCreate model, and the Accelerated Schools model. A survey of 280 public high school principals in Colorado elicited a 65 percent response rate. Interviews were also conducted with three suburban, three urban, and three rural principals. The eight process elements that principals said they most frequently used did not match any of the change models in the research framework. Principals rated two items as the most important and the most likely to be used: "identify the problem" and "communicate the need for change to stakeholders." They reported that they rarely used research-supported strategies, pilot programs, and outside consultants. The results suggest a tenuous link between theory and practice due to principals' views of their responsibilities and the unique nature of their individual schools. Two tables are included. (Contains 30 references.) (LMI)

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A Study of the Change Process Utilized by Colorado High School Principals: The Concordance of Practice and Theory

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Introduction

The study of "change" and how change takes place in organizations has had a long and prolific history. Whether the term organizational development, systemic change, or school reform is applied to the study of change, the goal of any change effort is to improve the product or service offered to the organization's customers. An organization cannot continue to improve by maintaining the "status quo." As Denton (1995) has stated, continuous improvement means continuous change.

Change management is becoming more of a basic requirement for educational administrators rather than a specialty. School and business leaders of the future must be able to understand and successfully utilize the theoretical and practical aspects of the change process (Fung, 1992). Since most administrators have been involved in a number of changes throughout their career, the process of change may seem to be a simple matter of deciding on an innovation and moving forward with implementation. The processes used to initiate and implement change need to be considered as carefully as the innovation. The processes principals use in solving problems or implementing changes will characterize their effectiveness (Thurston, Clift, & Schacht, 1993). A common theme in the literature is that principals do not truly understand the change process and therefore cannot successfully implement change (Banathy, 1987; Clausen, 1985; Fullan, 1993; Fullan & Miles,1992; Fung, 1992; Walker & Vogt, 1987). Significant improvements in the educational system will not take place until there is an increase in the knowledge and practice of how change takes place in both individuals and organizations (Fullan & Miles, 1992).

While the research on the subject of change is prolific, few studies examine the processes utilized by principals when initiating change. Huling-Austin, Stiegelbauer and Muscella (1985) state; "While a significant amount of literature has developed about the high school principal, the literature that is based on research conducted on high school principals is quite limited" (p. 76). Regardless of the change, the principal plays a key role in any restructuring effort. "Throughout our years of research and experience, we have never seen a situation in which the principal was not a significant factor in the efforts of schools to improve" (Hall & Hord, 1987 p. 1). Principals today need to know how to

develop the needed skills to successfully use change theory and to understand the processes associated with successful educational change.

Why is the Process of Change so Difficult in Schools?

One aspect of changing educational practice that makes the process difficult is that historically new innovations and reforms have not survived. Reform efforts or changes that have not lasted do not necessarily indicate a poor idea or method. Cuban (1990) points out that reform efforts that fail usually do not address the problems they are intended to solve, or policy makers focus on the politics of the problem rather than the problem itself. He also states: "When value shifts occur in the larger society, schools accommodate" (p. 7). When values change, the focus of reform changes. The fluctuations in values which translate into fluctuations in reform efforts do little to encourage educators to embrace change. Dealing with the changing values of our society should not be viewed as problems to be solved, but as dilemmas that require compromises (Cuban, 1990). Schmuck and Runkel (1985) emphasize that schools are unique from other organizations in that they are vulnerable to short and long term pressures placed upon them from the community. As the population of parents change, values change, and schools abandon some ideas in favor of others that better match with community demands. The changing demands warrants a principal who can respond appropriately and make changes when needed. As principals face the task of change in their schools, particularly high schools, due to the stratification of power and fragmentation of the staff by departmentalization, convincing teachers that change is needed becomes the essential problem. Harvey (1990) explains that "change is not the problem of the changee, but of the changer" (p. 11). Principals must utilize change processes that inspire teachers to change. They must foster a culture that values innovation. Teacher must believe that a constant reevaluation of what they do in the classroom, associated with changes in teaching strategies, does not mean they are doing a poor job, but that they are better responding to the changing needs of their students.

Today, there is a large research base on school change that administrators can draw from to help them negotiate change in their schools, yet the change process is still as difficult as ever. "There are many unsolved questions both in the theory and practice of school change - how we understand it and how we do it" (Miles, 1993, p. 245).

Change Models

There are a number of change models that have been proposed to help educators navigate through the change process. The following review will be limited to four change models that were used as the framework for the study. These four, the Concerns Based Adoption Model, The Diffusion Model, the reCreate Model and the Accelerated Schools Model are both common to the change scholars and common to the field of education.

The Concerns Based Adoption Model

In their book *Change in Schools: Facilitating the Process,* Hall and Hord (1987) summarize the findings of 14 years of research and observations of the change process in schools. The book describes a change model called the Concerns Based Adoption Model, (CBAM). The model is meant to help individuals become more effective change facilitators and to help them better understand the process of change. The CBAM model emphasizes the need to understand teachers' attitudes and skills so that support activities based on the innovation or change being implemented can be related to what the teachers perceive they need.

The change facilitator is the key to using the CBAM model. The change facilitator is responsible for using informal and systematic methods to probe individuals and groups to understand them. Once an accurate diagnosis of the needs of the individuals has been made, specific interventions are planned to address the identified needs. Three proposed aspects must be addressed to complete the diagnosis of needs. The three areas are: (a) stages of concern, (SoC), (b) levels of use, (LoU), and (c) innovation configurations, (IC). The three areas represent key aspects of the change process as experienced by the individual users. A principal utilizing the CBAM model would play a major role in conducting research on the staff needs prior to implementing any change.

The Diffusion Model

The Diffusion model of change is base on how information about an innovation is communicated and what is done with the information once it is collected. Rogers (1995) states "the diffusion of

innovations is essentially a social process in which subjectively perceived information about a new idea is communicated. The meaning of an innovation is thus gradually worked out through a process of social construction" (p. xvii). Diffusion is a type of communication that specifically centers around a new idea. Research on diffusion dates back prior to the 1960's. The model has been refined over the years as more research data has been collected on how the diffusion process works.

There are four main elements in the diffusion of innovations which affects the rate of adoption: (a) the innovation, (b) communication channels, (c) time, and (d) the social system.

An innovation is an idea, product or practice that is new to the individual. It does not matter if the idea or product has been around for a while, what matters is that the person exposed to the idea or product perceives it to be new. The perceived newness determines how the person will react to the innovation. The characteristics of an innovation as perceived by an individual influence the rate of adoption.

Time is a component of the diffusion process that is important in the adoption of an innovation and is critical in three different areas: (a) the decision process in which a person passes from the knowledge stage to adoption or rejection, (b) the innovativeness of a person - the earliness or lateness in which an innovation is adopted compared with other members of the system, and (c) the rate of adoption usually measured by the number of people who have adopted the innovation in a given time period.

The social system and its structure affects the diffusion process by placing parameters on how certain innovations are viewed. If the social system does not accept or believe in a certain innovation, the chances for adoption are low. An understanding of the diffusion model can help change-facilitators develop communication channels that enhance the willingness and preparedness of individuals to change (Rogers, 1995).

The reCreate Model

Ronald Havelock who has been involved in the change process and in the development of change models since the 1960's has recently updated his change model. His model is comprised of seven stages that form the acronym reCREATE (Havelock, 1995). Havelock states that the model "is founded on the idea of a cycle of specific actions which promotes positive system change, a cycle which needs to be

repeated over and over again as change advances, with careful attention to each of the action steps" (p. 1).

As a change agent there are two ways to view the stages of an innovation: (a) from the point of view of the people being changed, and (b) from the point of view of someone who is trying to change someone else. The reCREATE model is based on the idea that "reason" needs to be added to the process of problem solving. The problem needs to be defined as clearly as possible. A wide variety of solutions, ideas and resources need to be identified and applied in a coherent and concerted manner.

The change agent needs to consider the different needs of the people involved in the change. As more people are involved in the change effort, the complexity of the interactions of the people increases, and the social relating skills of the change agent become paramount to success.

The Accelerated Schools Model

Henry Levin who first proposed the Accelerated Schools Project to help at-risk elementary students successfully transition into the educational mainstream, has developed a change model intended to help guide educators in the implementation of the Accelerated Schools format. Although the model was developed for a specific purpose, it is general enough to be used in any change effort.

The Accelerated School Project defines at-risk as, "those students who are unlikely to succeed in schools as schools are currently constituted because they bring a different set of skills, resources, and experiences than those on which school success is traditionally based"(Hopfenberg & Levin, 1993 p. 9). The at-risk student, in their opinion, does not have a background that matches what the school expects for success. It is pointed out that the student is really not at-risk, but they are in an at-risk situation. Schools have the ability to change the situation for these students.

The accelerated schools concept is geared to change the entire philosophy of the school staff and parent community. The process of transforming a traditional school into an accelerated school takes five or six years. The process developed to guide schools in their transformation process encompasses many of the stages or steps proposed in formal models of change. The process is based on the idea that the school has already embraced three principles: (a) unity of purpose, (b) empowerment coupled with responsibility, and (c) building on strengths. Hopfenberg and Levin (1993) outline how to transition into an accelerated school by implementing the suggested changes using the proposed process.

Purpose

The purpose of the study was to examine the change processes Colorado high school principals utilize when initiating and implementing change in their buildings and to determine if the elements of the processes used match four current change models reported in the literature. Specifically, the study examined the current processes used by Colorado high school principals when implementing change. The researcher's objective was to determine if similarities and differences existed between the current change models described in the literature and actual practice.

Methodology

This study incorporated a written questionnaire along with selected interviews of public high school principals in the state of Colorado. A cross-sectional survey methodology was employed to gather data in the spring of 1996.

A survey instrument was developed and distributed to each of the 280 public high school principal in Colorado in May of 1996. Four current change models were utilized as a conceptual framework to help develop the survey instrument. Upon completion of the data analysis, interviews were conducted with three suburban, three urban, and three rural principals. The results of the principal survey was analyzed to look for similarities in change processes reported by the participants. Common process elements that became apparent were compared to the selected change models to determine how closely practitioners follow theory. The data was analyzed using primarily descriptive statistical techniques, buy also employed Spearman's Rho, paired t-tests, oneway ANOVA and reliability tests.

Results

The original mailing of the survey in May of 1996 produced a 65% response rate. The follow-up mailing produced an additional 3% return, bringing the total to 68% as the final response rate. The final percentages in each category were 56% rural, 28% suburban, 14% urban and 4% resort or recreational.

Table 1 contains the process elements reported by respondents as important to the change process compared to the elements reported as likely to be used in practice. The items are sorted by mean score

ratings. The items listed first were rated as most important and most likely to be used. Three items were reported as least important and least likely to be used. These items were not included in the lists provided in table 1. The three disregarded elements were: (a) supported by current research, (b) pilot the change if possible, and (c) use of outside consultants. The order of items cannot be viewed as the order of use in any change process. The survey instrument did not attempt to have respondents arrange the process elements in the order that they would use them in practice. The list reflects what items are reported as important to principals when initiating or implementing change and which items would be used in practice.

When comparing the two lists, items reported as important with items used in practice, four elements that were reported as important did not make the list of elements used in practice. The four elements reported as important, but not used were: (a) build consensus for the change, (b) involve parents and community, (c) input from students and parents, and (d) training of staff on innovation (Table 1). The discrepancy between the process elements that principals view as important to the change process, and the elements that would actually be incorporated into any change effort may not signify that these elements are not considered during a change effort. The interview data indicated a variety of reasons for this finding.

The list of elements reported as utilized in practice were compared to the four theoretical models used as the framework when developing the survey instrument. The four models were, The Concerns Based Adoption Model, The Diffusion Model, the reCreate Model, and the Accelerated Schools Model. The elements reported as actually used in practice did represent selected components of each model, but the entire group viewed collectively did not match one model closely enough to conclude that it was the model principals follow (Table 2).

Table 1

Process Elements Reported as Important and Process Elements Reported as Used in Practice

Process Elements Reported as Important	Process Elements Reported as used in Practice
1. Identify the problem	1. Identify the problem
2. Communicate the need to change to stakeholders	2. Communicate the need to change to stakeholders
3. Develop a vision for the school	3. Identify and analyze staff concerns
4. Evaluation of the change	4. Develop a vision for the school
5. Determine available resources	5. Design an implementation strategy
6. Identity and analyze staff concerns	6. Survey staff to determine needs
7. Design an implementation strategy	7. Determine available resources
8. Build consensus for the change	8. Evaluation of the change
9. Training of staff on innovation	
10. Involve parents and community	
11. Input from students and parents	
12. Survey staff to determine needs	

Table 2

Comparison of Change Models and Process Elements Reported as Utilized in Practice

Process Element	Change Model/s that Corresponds to the Process Element 1 = The Concerns Based Adoption Model 2 = The Diffusion Model 3 = The reCreate Model 4 = The Accelerated Schools Model
1. Identify the problem	2, 3, and 4
2. Communicate the need to change to stakeholders	2
3. Identify and analyze staff concerns	1 and 3
4. Develop a vision for the school	4
5. Design an implementation strategy	1, 2, 3, and 4
6. Survey staff to determine needs	1 and 3
7. Determine available resources	3 and 4
8. Evaluation of the change	1, 2, 3, and 4

The determination of whether or not a process element matched with one of the models, was made by comparing the element with the listed stages or steps described for each model by the model's author. It can not be concluded that because the author of a theoretical model did not specifically address one of the process elements in his/her list of steps or stages, that the element was viewed as unimportant. For example, the process element "communicate the need to change to stakeholders" was specifically addressed in the list of the stages or steps only by the Diffusion model. The other authors may have addressed communication as a needed strategy in their explanation of their model, but did not highlight it, and list it, as a specific stage or step in the process. Since the data collected in this study were organized in list form, the researcher felt it was important to compare the data only with the lists of process elements presented for each theoretical model.

The reCreate model proposed by Ronald Havelock appears to be the model that matches most closely with the items principals reported as utilizing in practice. The list of the stages or steps of the

reCreate model matches with six out of the eight process elements principals reported as using in practice.

Discussion

Principals reported 12 items that they considered important when initiating and implementing change. When asked which process elements they would be likely to use during a change effort, only eight items were reported as actually used.

The two items rated as most important and the two items rated as most likely to be used were the same. "Identify the problem" was rated as the most important and most likely to be used. "Communicating the need to change to stakeholders" was rated second most important and second most likely to be used. The three items that were rated as least important and least likely to be used were: supported by current research, pilot the change if possible, and the use of outside consultants. The three items rated as least likely to be used may prove to have greater consequences for practicing administrators who continue to neglect to incorporate them into their change process.

Identifying the problem and what needs to be changed is the most important aspect of the change process (Cuban, 1988). A recommendation from this study is that principals need to develop a system of organizational analysis that allows them to construct an accurate description of what is working in their schools and what is not. An accurate assessment will ensure that the correct problem is addressed and meaningful change takes place.

Communicating the need to change to stakeholders may be just as important as identifying the problem. If the need to change is communicated in a way that convinces the people affected by the change, the chance for success of the change effort will be increased. The communication skills of the principals are important due to the necessity of collecting and communicating accurate and relevant information which supports the implementation of the change.

Any variation between elements reported as important, and elements reported as used in practice may center around the unique and individual nature of each school, and each change effort. The vast number of variables that are associated with any change effort may limit a principal from incorporating a process element that is viewed as important. For example, parent and community involvement can be difficult at the high school level. It was noted that high school parents have sometimes " given up" trying to stay involved with their child's educational pursuits. So in the case of parent and community

involvement, the principal may believe it is extremely important, but will be unable to utilize the process in practice. Demographic characteristics also contribute to the difference between the items rated as important and the items rated as used in practice. Process elements such as "build consensus for the change," may be difficult to use in practice due to factors related to school size based on total student population. In a large high school, the many stakeholders involved in a change effort may make it impossible to ever reach a true consensus. The departmentalization and specialization of teachers produces diverse needs and concerns. The best possible scenario may be to have a majority of the staff in favor of the change at the onset. It was also noted in the interview data that many change efforts that are initiated at the district level may be presented with a prescribed process and time line for implementation. In districts where the school principals have little or no control over systemic change efforts, the items that are viewed as important by the principal may be impossible to use in practice due to directives from policy makers outside the school.

The Congruence of Practice and Theory

The eight process elements reported as commonly used in practice did not match any one of the four models used as a framework for the development of the questionnaire. The eight elements were, develop a vision for the school, identify the problem, communicate the need to change to stakeholders, survey staff to determine needs, identify and analyze staff concerns, determine available resources, design an implementation strategy, and evaluate the change. Each process element could be found in one or more of the models.

Although the eight process elements reported as used in practice most closely resemble the reCreate model proposed by Havelock, the variation indicates that there is a unique set of process elements, when viewed as a group, that Colorado high school principals incorporate into practice. The items should not be thought of as a step by step guide to implementing change, but rather a framework that highlights what principals in Colorado believe are the most important elements of the change process. Since the eight elements do not represent a theoretical model of change, it may support the idea that principals rely heavily on intuition in designing and implementing most change efforts.

Model of how To Utilize the Top Eight Process Elements

This model uses the eight items that were reported by principals in the study as process elements that are used when initiating and implementing change in their buildings. The first element is the development of a vision for the school. Developing a vision for the school and working to achieve the goal should be the foundation that drives any and all change efforts in the school (Hopfenberg & Levin, 1993; Miles & Louis, 1990; Sashkin & Egermeier, 1992; van der Vegt & Knip, 1988). Vision is a widely written about concept but should not be thought of as static, or set, once it is developed. As Stacey (1992) stresses, the future is unpredictable. Changes in society or within any organization will warrant that the vision be constantly addressed and altered as new demands on the system develop. This is not to say that a general guideline or vision cannot be developed, but it should be flexible in the details to allow for improvements when future realities become clear. The development of a vision for the school should involve as many of the stakeholders as possible. The more input that is gathered, the greater chance that the vision will be honored and useful to the school improvement process. The principal's vision, regardless of how it is developed, should be the framework that supports the school improvement efforts. "Visions are necessary for success but few concepts are as misunderstood and misapplied in the change process" (Fullan, 1993 p. 28). Understanding the importance of a vision that is flexible may help principals better utilize vision as a tool for school improvement.

The second element is the identification of the problem. Once a vision is developed, the identification of problems can be based on what needs to change in order to realize the vision. The use of carefully gathered assessment data on the progress of the school toward realizing the vision will be critical in assuring that the correct problems are identified and addressed. The disregard for research that was noted in this study raises the question of whether principals are adept at properly using assessment data. Identifying problems can and will be part of every stage of the change process. The problem should help focus the principal on what needs to change.

The third process element reported as used is "communicate the need to change to the stakeholders." Communicating the need to change to the staff and other stakeholders may incorporate many methods and stages. It is important that the need to change be communicated with data and research to support the change and with the perceived benefits of implementing the innovation to those involved. Helping

people to reach their own conclusion that the change will be beneficial is a critical area that principals contemplating change must address.

The fourth and fifth elements are, "the use of a survey to determine staff needs," and the "identification and analysis of staff concerns." Using the survey process, the principal will be able to develop strategies to address both the needs and concerns that will decrease resistance and increase the chance of successfully implementing the change. Literature on resistance suggests helping people embrace the change as much as possible will enhance success (Fullan & Miles, 1992; Harvey, 1990). The information collected from the staff can also be used to help identify problems that must be solved before the staff can realize their vision of the future.

The sixth process element reported as used in practice is the "determination of available resources." The determination of available resources encompasses all aspects of the proposed change from monetary demands to staff expertise, and their willingness to participate in the effort. In determining resources, new problems may develop that will impact the implementation process. Principals need to understand the potential and the limitation of the resources available to them before designing and implementing the change. The creative use of resources can also enhance success.

The seventh process element is the "design of an implementation strategy." Designing an implementation strategy based on the concerns and needs of the staff, the available resources and the desired time-line of the change may be the most difficult aspect of the change effort. Implementation may also be the stage that best fits with the principal's reliance on intuition for guidance that was reported in the study. An implementation strategy based on "feel" may lead to problems. Hall and Hord (1987) identify interventions made during a change process that were not made at appropriate times, or in ways that were perceived by the participants as irrelevant as one cause of failure. It is suggested that principals develop an implementation process that is based upon research findings on successful change efforts and on the concerns or needs of the staff.

The final element reported as used in practice is the "evaluation of the change." Evaluation of the change should be made during and after implementation. The evaluation should be based on how effective the change was in moving the school closer to the vision of the desired state. Changes that do not produce results that support the vision should not be implemented or continued. Principals will need to gather relevant data that can be analyzed accurately in order to properly evaluate any change. Principals will also need to be aware of pressure to change in ways that do not support the school

vision. Schools like any other organization have a tendency to change not due to the pressures from the environment, but from how the principal or manager perceives the environment (Kanter, 1983). Principals will need to develop an accurate perception of the environment of the school so only needed changes are initiated.

Process Elements Disregarded by Principals

Regardless of how the data were analyzed, three process elements sorted out at the bottom of the list of the 15 process elements included on the survey with respect to their perceived importance, and the likelihood of the principal ever utilizing them in practice. The last three items in the perceived order of importance and likelihood of use were: supported by current research, pilot the change if possible, and use of outside consultants.

Supported by current research.

Principals interviewed reported that the lack of use, and disregard for research did not surprise them. One reason reported was due to the complexity of the job limiting the amount of time that the principal could spend finding and analyzing the research. A second idea was that principals were selective in the research that they would utilize. Research that supported their thinking had a better chance of being incorporated into a change effort. The concept that research is used selectively to validate an organization's goals and can be used to justify policy has been reported by Shavelson (1988).

Principals reported that neglecting the current research developed from the attitude that each high school is a unique entity. The uniqueness of the school creates a conflict in the ability to implement ideas that a principal views as hypothetical and which were not designed with the specific school in mind.

The reasons given for not using research when initiating and implementing change, may seem valid to practitioners, but decisions based on factors other than research have serious ramifications for meaningful school reform efforts. Principals need to embrace research as a method for identifying problems and as a tool for persuading stakeholders that changes need to take place. The use of research will also help principals avoid the implementation of meaningless or ineffective changes.

Researchers must also realize that the belief systems of practitioners limit the effectiveness of theory actually influencing practice. There is a problem with matching what practitioners expect research to produce, and what the researchers' goals for the study were at the onset of the project. As Shavelson (1988) pointed out, practitioners think that research should directly and immediately influence practice. Although the direct application would be helpful, principals need to understand that many research projects are not designed for immediate application, and they must become adept at translating scientific knowledge into practice. By understanding that analysis of the information for practical application is up to the practitioner, the attitude that research is not helpful because it is not structured around the unique needs of the school can be eliminated. Principals need to become discriminating in their use of research in order to avoid implementing changes that turn out to be unsuccessful. Researchers must also work to better understand the practitioners' viewpoint in order to help theoretical knowledge be applied to practice.

It should be noted that even if principals reported a propensity for using research to help guide practice, research by Crandall and Louchs (as cited in Louchs-Horsley and Mundry, 1991) suggests that schools and the people within them do not change their practices as a result of printed materials, even those that are specific about the behaviors, procedures, and structures needed to succeed. They go on to say that personal assistance from consultants is required if the change effort is to be adopted and used. Drucker (1992) speaks about the fact that a person's knowledge base can change quickly, but their skills seem to change much more slowly. Drucker's thinking may support the idea that written material does not have the desired effect on the reader that most researchers would hope for when publishing their results. Regardless of the problems associated with research influencing practice, high school principals need to become more willing and more adept at using research to guide their change efforts.

Piloting the change.

Piloting the change received mixed impressions on why it appeared to be less important and less frequently used. Some principals felt that pilots were too time consuming and could be difficult to use as an evaluation of an innovation since the pilot can never truly mimic full implementation. Other principals believed that the pilot process was important and reported utilizing it as a way to reduce resistance for a change by allowing resisters to see the innovation in use. Another reason to test an

innovation through a pilot program, is the ease of obtaining approval from the central administration or the Board of Education. Principals reported that by calling any change a "pilot", decision makers were less likely to oppose the change.

The literature supports the benefit of piloting change efforts. Pilots can highlight successful innovations which can then diffuse to other parts of the organization. The ability to try an innovation and evaluate the effectiveness of the change can be a key factor in the decision to adopt or abandon the change (Beer & Walton, 1990; Dixon, 1991; Fung, 1992). It is suggested that principals develop strategies to utilize small scale pilot programs as an evaluation technique prior to implementing an innovation. By analyzing the results of a pilot study, principals can avoid implementing changes that do not solve the problems identified which stimulated the need to change in the first place.

The use of outside consultants.

The use and importance of outside consultants has been reported as a critical factor in the success of systemic change efforts that utilize the theory of organizational development (Louchs-Horsley & Mundry, 1991) and Rosenblum's (1981) study (as sited in Louchs-Horsley & Mundry, 1991). Miles and Louis (1990) reported that in order to be successful in their change efforts, participants in their study needed 50 days a year of external assistance for training, coaching, and capacity building.

McLaughlin (1989) contradicts the beneficial aspect of outside consultants. Her analysis of the Rand Change Agent Study, reported the reliance on outside consultants to be an ineffective change strategy. She reported the use of local staff for assistance in the classroom of teachers involved in the change effort as more effective.

Fullan (1991) also reports that the use of external agencies or consultants has been near the bottom of the list of helpful or influential resources on general-survey type studies in Canada. Berman and McLaughlin (as cited in Fullan, 1991) state, "the use of external consultants was not related to achievement of project goals, and that by and large external consultants were superficially or poorly used" (p. 222).

The data from this study appear to support the findings of researchers such as McLaughlin (1989), and Fullan (1991), who have reported that external consultants do not influence the change process in local schools. Many reasons were given by interview participants concerning why principals did not

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incorporate consultants into their change efforts. The uniqueness of the school, the skeptical nature of high school teachers toward consultants, the short term relationship with consultants precludes making any meaningful connections with the staff, and the cost were all noted as reasons for avoiding the use of consultants. It is suggested that since change is a complicated task, and that innovations may not prove ineffective until after they are implemented, principals need to embrace the importance and use consultants.

Principals reported that consultants were not helpful because they did not spend enough time to really understand the school and to offer meaningful suggestions. Research by Loucks-Horsley and Mundry (1991) also supports this conclusion. They point out that when consultants only spend one or two days in a school it is difficult for them to understand the context of the change and work on a meaningful course of action. What is suggested by Loucks-Horsley and Mundry is a technical assistance model where the consultant establishes an internal support system which provides ongoing coaching and trouble shooting.

It may be difficult for principals to find a consultant who is willing to invest the amount of time needed to develop a proper technical assistance model or if a person is found, the cost may be prohibitive. What principals need to focus on is the aspect of internal consultants. Internal consultants can be developed from within the building or district. The Diffusion model of change developed by Rogers (1995) explains the enhanced effectiveness of information passed on by someone who is perceived as a colleague or friend. People are more likely to trust information received from a person who has first hand knowledge of an innovation, than they are from a so called expert. The best consultant may be a person from within the school, or district who can explain how the innovation was incorporated into their practice and who is available on an ongoing basis.

Principals who become better researchers may become their own building consultants. When consultants from outside the school are used, principals need to develop strategies that increase the trust level between the staff and the consultant. One day training sessions are not effective. A continuous "team" effort with the consultant is recommended. Introducing the consultant's work and ideas to the staff prior to his/her arrival will allow staff members to develop a professional respect for the person which may increase the trust level between the consultant and the staff.

Conclusion

It was found that Colorado high school principals do not follow a theoretical model of change. The process elements identified as utilized in Colorado can be considered a unique "practical" model of change. These elements can be incorporated into a change process that is based on "best practice." This practical model can be useful to new high school principals as they establish, and refine, their change process.

Along with the eight process elements identified in the study, the use of current research and the incorporation of outside consultants needs to be considered by principals when initiating a change effort. Without the research base and the help from experts in the field, principals run the risk of implementing changes that will fail due to an inadequate understanding of the innovation, or an inadequate understanding of the change process.

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